

Notice of Allowability	Application No.	Applicant(s)	
	09/580,327	STEINBACH, RALF D.	
	Examiner	Art Unit	
	Luke S. Wassum	2167	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to RCE and Preliminary Amendment filed 7 March 2005.
2. ☒ The allowed claim(s) is/are 1-4, 6, 7, 10, 11, 13-21, 23, 24, 27, 28, 30-36 and 39-44.
3. ☒ The drawings filed on 26 May 2000 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| <ol style="list-style-type: none"> 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | <ol style="list-style-type: none"> 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ 7. <input type="checkbox"/> Examiner's Amendment/Comment 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance 9. <input type="checkbox"/> Other _____ |
|--|--|



Luke S. Wassum
Primary Examiner
Art Unit 2167

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 7 March 2005 has been entered.

Response to Preliminary Amendment

2. The Applicant's preliminary amendment, filed 7 March 2005, has been received, entered into the record, and considered.

3. As a result of the amendment, claims 1, 2, 6, 13, 17, 18, 23, 24, 32, 33, 36, 43 have been amended, claims 9, 26 and 38 have been canceled, and new claim 44 has been added. Claims 5, 8, 12, 22, 25, 29 and 37 have been previously canceled. Claims 1-4, 6, 7, 10, 11, 13-21, 23, 24, 27, 28, 30-36 and 39-44 remain pending in the application.

The Invention

4. The claimed invention is a system for retrieving data from a database using a data management system including a change retrieval engine.

Allowable Subject Matter

5. Claims 1-4, 6, 7, 10, 11, 13-21, 23, 24, 27, 28, 30-36 and 39-44 are allowed.
6. The present invention is directed to a change retrieval engine operable to determine when a change has occurred in a database, receive information identifying the particular business object with which the changed data is associated, access a data model specifying tables associated with the particular business object, identify tables associated with the particular business object, identify data within the related tables that is associated with the particular business object, and retrieving the data associated with the particular business object.

The closest prior art of record, **Mukhopadhyay et al.** (U.S. Patent 6,032,158) teaches a system for capturing and propagating changes from an operational database to data warehouses or data marts, including accessing a repository to access mapping information relating to how data is to be mapped and transformed from source tables of operational databases to target tables of data marts (see col. 3, lines 35-59).

However, **Mukhopadhyay et al.** fails to anticipate or render obvious the recited feature of a plurality of instances of the particular business object, each of which has its own key value identifying that instance, wherein different instances contain different subsets of data related to the particular business object, and wherein for each instance of the particular business object, identifying data that is related to that instance of the particular business object, as in independent claims 1, 18, 32, 33 and 43.

These features, together with the other limitations of the independent claims are novel and non-obvious over the prior art of record. The dependent claims 2-4, 6, 7, 10, 11, 13-17, 19-21, 23, 24, 27, 28, 30, 31, 34-36, 39-42 and 44 being definite, enabled by the specification, and further limiting to the independent claim, are also allowable.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Bredenberg (U.S. Patent 5,826,253) teaches a client/server system with methodology for notifying clients of any additions, deletions or modifications occurring at the database server which affect the validity of a range of data records cached in local memory buffers of clients.

Nesamoney et al. (U.S. Patent 6,044,374) teaches a method for sharing metadata between multiple data marts through object references.

Gorelik et al. (U.S. Patent Application Publication 2001/0047372) teaches a system wherein hierarchical documents or messages are mapped to a nested relational data model to allow for transformation and manipulation using declarative statements.

The following reference, while not qualifying as prior art, is also of interest:

White ("An Analysis-Led Approach to Data Warehouse Design and Development") teaches a method of designing data warehouses which allow the maintenance of quality data across the diverse set of transaction, decision and collaborative processing applications that exist in most organizations today.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Luke S. Wassum whose telephone number is 571-272-4119. The examiner can normally be reached on Monday-Friday 8:30-5:30, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E. Breene can be reached on 571-272-4107. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

In addition, INFORMAL or DRAFT communications may be faxed directly to the examiner at 571-273-4119.

Customer Service for Tech Center 2100 can be reached during regular business hours at (571) 272-2100, or fax (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Luke S. Wassum
Primary Examiner
Art Unit 2167